

ELECTRICITY TRANSMISSION NETWORK owners

NEMMCO Rule Change Proposal – Technical Standards for Wind Generation

Submission in response to AEMC Initial Consultation

23 June 2006



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Introduction

This submission is made on behalf of the Electricity Transmission Network Owners' Forum (ETNOF) representing ElectraNet Pty Limited, Powerlink Queensland, SP AusNet, Transend Networks Pty Ltd and TransGrid (the "TNOs"). Collectively, this group owns and operates over 40,000 km of high voltage transmission lines and has assets in service with a current regulatory value in excess of \$9.1 billion.

NEMMCO submitted a Rule Change Request to the AEMC in February 2006 relating to the technical standards that apply to generation in the National Electricity Market (NEM), particularly wind generation.

In response, the AEMC has commenced an initial consultation "Technical Standards for Wind Generation" with respect to the proposed changes to the National Electricity Rules (the Rules). In a separate but related process the AEMC is reviewing the setting of plant performance standards, and the enforcement of and compliance with such standards. In this regard the AEMC recently published its Draft Report to the Ministerial Council on Energy entitled Review of Enforcement and Compliance with Technical Standards (the "Draft Report to the MCE"). This report acknowledges the NEMMCO Rule change proposal and proposes resolution of this proposal by December 2006.

Significantly, the Draft Report to the MCE also proposes urgent action to confirm and document the performance standards applying to plant with existing access to the interconnected power system. ETNOF endorses this recommendation.

Summary

ETNOF supports the need to clearly and appropriately include wind generation within the NEM framework for establishing performance standards for access seekers. However, significant aspects of the NEMMCO proposals extend beyond this objective and, as the AEMC has acknowledged, impact on (probably inadvertently) a number of the issues now raised in the Draft Report to the MCE.

NEMMCO's proposed rule change deals with three distinct issues:

1. Access negotiation and performance standard setting processes (generally);
2. Disclosure of information (generally); and
3. Technical standards related to wind connections (specifically).

Accordingly, NEMMCO's proposed rule changes cover much more than technical standards related to wind connections. For example, NEMMCO proposes changes to the respective roles of NEMMCO and Network Service Providers (NSPs) in the setting of performance standards for new generators. These proposals are potentially far reaching and clearly impact on the wider consultation on this matter proposed in the Draft Report to the MCE.

Accordingly, for the purposes of the consultation on the NEMMCO proposals, ETNOF strongly recommends that the AEMC only review and consider those aspects of NEMMCO's submission that deal specifically with technical standards for wind generation.

In addition, ETNOF recommends that:

- NEMMCO and the AEMC resolve the status of existing plant performance standards as a matter of high priority as recommended in the Draft report to the MCE (ETNOF members would be pleased to assist in this process as appropriate with the agreement of NEMMCO and the AEMC);
- The AEMC ask NEMMCO to revise the scope and content of its proposed rule changes to solely relate to technical standards for wind generation (permitting this proposal to be considered separately from the wider issues raised in the Draft Report to the MCE); and
- NEMMCO be asked to provide evidence to demonstrate the benefits of each aspect of the proposed rule change ultimately considered by the AEMC.

Overarching Accountability Framework

In assessing proposals on the management of, and accountability for, technical standards it is helpful to adopt a framework similar to that adopted by the AEMC in the Draft Report to the MCE. In that report the AEMC considered each of the following elements of the framework separately:

1. Adequacy of current technical standards for existing plant
2. Adequacy of current technical standards for new plant
3. Compliance programs, monitoring and notification
4. Enforcement and penalties

The existing framework in the Rules clearly recognises that NEMMCO is accountable for operating the power system delivered to it in a secure state. However, the Rules set out that the power system is delivered and developed by the NEM participants. The practical outworking of this framework is that the shared transmission system is planned and developed as a prescribed service by the NEM transmission service providers.

However, the Rules appear deficient in that accountabilities for the management of technical standards are not clearly defined in these terms. Using this framework the accountabilities become clearer. NSPs need to have a central role in the setting of performance standards for new plant because these standards impact on transmission capability and system standards. For example, changes to generator power system stabiliser settings had a significant impact on the transfer capability of the Queensland New South Wales Interconnector (QNI). NSPs also need to play central role in the setting of performance standards that impact on power quality.

The status of technical standards for existing plant has been correctly identified as an important issue requiring urgent attention. As mentioned above ETNOF supports the AEMC's initial recommendations on this matter and will take a keen interest in the outcomes, particularly where transmission capability or power quality is impacted.

Regarding the setting of performance standards for new plant it is essential that NSPs have a lead role in this process, as they currently do. At this stage it is not clear to ETNOF that there are material issues with the current arrangements in this regard. There is certainly no clear case in the Draft Report to the MCE for adopting the NEMMCO proposals on this matter.

However, ETNOF does not believe that TNSPs should have their current level of responsibility in the compliance and enforcement of performance standards of plant

connected to the network. These accountabilities would appear to be more matters for the connection applicants and the AER and should be reviewed. However, while TNSPs should not be responsible for testing they do need to have some involvement in testing because of the importance of test information in validating system capability and performance.

NEMMCO's Rule Change Proposal

NEMMCO's Rule change proposal identifies the following as the main issues with the current framework:

1. Access negotiation and standards setting – NEMMCO's concerns appear to be that the negotiation framework for generator access to the network is inadequate in that it is unclear in some areas, does not cover all technical requirements and precludes use of alternative technologies to meet the requirements;
2. Requirements for provision and dissemination of information – NEMMCO's concerns appear to be that current arrangements for dissemination of information such as plant models are inadequate; and
3. Technical requirements – NEMMCO's concerns appear to be that the technical requirements are expressed in terms that cannot be applied to all generation technologies.

To address these issues, NEMMCO proposes amendments to the Rules as follows:

1. Enhance NEMMCO's powers in negotiation of technical requirements, introduce reliability of supply as a basis for negotiated access standards, and broaden the factors to be considered when assessing impacts of new generation on power transfer capabilities;
2. Require the staged disclosure of information by NSPs commencing at the time of submitting a connection enquiry. Require guidelines and procedures to be developed by NEMMCO and NSPs on information to be included in plant models and the form in which it is to be provided. Give NEMMCO and NSPs the authority to require models to be verified through testing; and
3. Ensure technical standards cover non-scheduled generating units and ensure technology specific terminology is only applied where appropriate.

Key Issues with NEMMCO's Submission

Context and Scope

The AEMC's initial consultation on NEMMCO's rule change request immediately follows a separate AEMC initial consultation considering technical standards more broadly. As the AEMC recognises in the Draft Report to the MCE, there is considerable overlap between these two consultations and it is cumbersome and inefficient for interested parties to run them concurrently.

The title of the proposed rule change "Technical Standards for Wind Generation" implies that proposed changes only impact wind generators. This is not the case. As recognised in the Draft Report to the MCE, the proposed Rules include substantial amendments to broader aspects of the Rules with significant implications for all participants.

Given the context described above, ETNOF recommends that the AEMC, in their rule change review, should only consider aspects of NEMMCO's proposed rule change that solely relate to technical requirements for wind generators. ETNOF proposes that other aspects, which deal with the access negotiation framework and information disclosure arrangements, be covered separately by the AEMC's technical standards review. Notwithstanding this, ETNOF has endeavoured to offer high level comments on the key aspects of NEMMCO's proposed rule change.

Access Negotiation and Standards Setting

As noted above, ETNOF considers the existing process for the negotiation of performance standards with new generators (wind or otherwise) to be generally consistent with the wider accountabilities of NEMMCO and NSPs in the NEM Rules. This process is generally undertaken between the NSP and the connection applicant with some NEMMCO involvement including reviewing these arrangements prior to registration of the resulting performance standard. ETNOF is not aware that this access negotiation process itself has adversely impacted a new generator in terms of the cost of connection or the time taken to connect.

According to the Draft Report to the MCE issues that have been raised concerning the existing process are:

- It is unclear as to who is accountable for decision making with respect to the applicable performance standard (NSP or NEMMCO); and
- It is unclear as to what performance standard is applicable in the event that an existing generator alters its generating plant or extends the Connection Agreement.

NEMMCO's submission does not resolve either of these key issues. On the contrary, it:

- Further confuses the division of responsibilities between the NSP and NEMMCO¹; and
- Further confuses what performance standard is applicable in the event that an existing generator alters its generating plant or extends the Connection Agreement².

NEMMCO states that the changes to the negotiation framework effected by the rule change proposal are intended to "*streamline the compliance process by recording performance agreements outside Connection Agreements, relaxing some restrictions on how performance standards can be modified and requiring NEMMCO input to the wording of performance agreements before the execution of Connection Agreements*".

ETNOF considers that NEMMCO's proposal does not achieve these stated objectives. On the contrary, NEMMCO's proposed expanded role in the negotiation framework appears to result in cumbersome and duplicative processes. Of particular concern is that NEMMCO's proposal will place NEMMCO's assessment of the performance standards on the critical path for connection. This process is, arguably, more cumbersome than the existing arrangements and will inevitably delay connections to the network.

1 In particular, NEMMCO's proposed clause 5.3.7(a3) provides that the proponent and NSP cannot execute a Connection Agreement without NEMMCO approval. Further, clause 5.3.7A and 5.3.7B confer on NEMMCO a power to accept or reject the performance standards in a proposed Connection Agreement after the negotiation, but prior to the execution of that agreement. Clause 5.2.5(a) also means that performance standards will take precedence over both existing and new Connection Agreements.

2 New clauses 5.3.1(b) and clause 5.3.9 attempt to create a truncated process to deal with the scenario where a generator alters aspects of its plant but does not necessarily modify its connection. However, a number of sub-clauses of clause 5.3 still appear to apply to alterations to generating plant. The drafting suggests that the more onerous process described in clause 5.3 should still apply in the event that a generator alters its plant in a way that does not affect the performance of the generating system relevant to the specified technical requirement.

ETNOF does not support aspects of NEMMCO's proposed rule change that confer additional powers on NEMMCO. In particular, proposed clause 2.9.2(d) would confer on NEMMCO broad power to impose terms and conditions on any registration without the resultant obligations being subject to a rules change process. NEMMCO would, in effect, have the power to impose obligations on all participants including NSPs, generators and customers that would ordinarily be imposed by the Rules. NEMMCO's submission does not provide any explanation of the benefits of conferring such a power on NEMMCO. To the extent that such broad powers are considered necessary there needs to be countervailing requirements for increased transparency and review of the exercise of such powers. NEMMCO has not addressed this issue in their proposal.

As a general principle, the process for establishing a performance standard should form part of the broader process of planning and developing the transmission network. ETNOF therefore recommends that NSPs continue to maintain ownership over the process of establishing the performance standards (for new and modified connections), with the standards remaining in the Connection Agreement, but the Agreement requiring NEMMCO approval of the performance standards prior to generator commissioning. In practice, this could be achieved by the NSP and proponent entering a Connection Agreement with NEMMCO's acceptance being a condition precedent. A prudent proponent would as a matter of course include NEMMCO in discussions (but not negotiations) to minimise the risk of the performance standards being rejected. In its assessment, NEMMCO should have a defensible, material power system security impact justification for rejecting proposed performance standards.

NEMMCO also proposes to change a number of mandatory standards to negotiated access standards. Additional criteria for negotiated access standards are also proposed. These changes impose an additional administrative burden and costs on NSPs that do not appear to be justified by quantifiable benefits. In the event that they are ultimately considered to be justified it should be made clear that these are new service obligations for the purposes of NSP revenue cap assessments.

Disclosure of Information

NEMMCO proposes that further disclosure of generating plant technical information to prospective connection applicants would allow those new applicants to assess the likely performance and effect of their plant on the power system. NEMMCO's proposed new Clause 5.3.2(e) provides that where the operation or performance of plant subject to an application to connect could be materially affected by another project, the NSP must provide to the connection applicant either preliminary data (if the project is subject to an application to connect) or detailed data (if an offer to connect has been made) in relation to the project.

Under NEMMCO's proposal, it would be incumbent on the NSP to identify projects that would materially affect the performance or operation of the plant of the connection applicant. While the obligation is presumably directed towards the connection of two non-scheduled generating systems to a constrained line, no guidance is provided on what is meant by "another project". It could be argued that any other project subject to an offer to connect will materially affect the operation of the plant of the connection applicant, in so far as increased generation will impact loss factors and power transfer capabilities. It is unlikely the NSP could fulfil such a broad obligation from a practical perspective.

ETNOF would suggest that further consideration is needed as to whether NEMMCO should have full responsibility for dissemination of all plant information.

Wind Generation

NEMMCO's submission is far reaching, covering much more than the technical standards related to wind connections, and it is difficult to distil the proposals related to wind generation from the broader changes. Whilst developed in consultation with WETAG, the NEMMCO proposals have not been fully consulted with WETAG or market participants, especially in their current form. ETNOF strongly recommends that the AEMC should only review and consider those aspects of NEMMCO's submission that solely deal with technical standards for wind generation. To facilitate further consultation on these matters, the AEMC should direct NEMMCO to revise the scope and content of the proposed rules changes to solely relate to technical standards for wind generation, and NEMMCO should provide evidence to support the demonstrable benefits of each aspect of the proposed rule changes.

Nevertheless, ETNOF generally supports the need to clearly include wind generation within the NEM framework for establishing performance standards for access seekers. ETNOF also specifically agrees that:

- The technical standards should be technologically neutral;
- Wind farms should be dispatchable; and
- Wind farms should be permitted to participate in ancillary service markets;

Conclusions and Recommendations

ETNOF does not support the passage of the NEMMCO proposals in their current form. In general they go well beyond the stated intention of ensuring technical standards cover non-scheduled generating units and ensuring technology specific terminology is only applied where appropriate. They also fail to address the issues with standard setting identified by the AEMC in the Draft Report to the MCE, while at the same time giving NEMMCO significant additional powers without clear justification or offsetting scrutiny of the exercise of those powers.

The new information disclosure requirements, proposed by NEMMCO, impose impractical obligations on NSPs, as well as additional implementation costs. More standards are to be negotiated rather than mandated and new criteria for negotiation are proposed, again adding implementation complexity and costs, including costs for NSPs.

Accordingly, ETNOF strongly recommends that the AEMC only review and consider those aspects of NEMMCO's submission that solely deal with technical standards for wind generation.

In addition, ETNOF recommends that:

- The immediate priority for NEMMCO and the AEMC should be to resolve the status of existing plant performance standards as recommended in the Draft Report to the MCE;
- The AEMC ask NEMMCO to revise the scope and content of its proposed Rule changes to solely relate to technical standards for wind generation in order for the proposal to be considered separately from the wider issues raised in the Draft Report to the MCE; and
- NEMMCO be asked to provide quantitative evidence to demonstrate the benefits of each aspect of the proposed rule change.